

herbarium. Probably this species may also occur in other parts of the country, and is being confused with the other species. However, the present species can be separated from *S. indica* as follows:

Branches green, spikes erect; corolla deep blue; limb 6-8 mm across, tube 6-8 mm long.....

..... *indica*

Branches purple or green; spikes decurved or drooping; corolla light blue turning white; limb 3-4 mm across; tube 4-5 mm long....*dichotoma*

Detailed description along with illustrations of the plant are given to facilitate its easy identification.

Stachytarpheta dichotoma Vahl, Enum. Pl. 1: 207. 1805.

Much branched undershrubs; branches dichotomous, purplish or sometimes green, faintly quadrangular, sparsely hairy; leaves 5-10 x 2-4.5 cm, ovate-elliptic, dentate, base decurrent along the petiole; flowers sessile, immersed in long, slender decurved spikes, bracteate;

bracts lanceolate-subulate, 4-4.5 mm long (D); spikes 10-30 cm long; calyx tubular, 5-ribbed, 5 mm long (E); corolla salver-shaped, light blue turning to white (C); limb 3-4 mm across, oblique, 5-lobed; tube curved, 5 mm long, hairy within (C); stamens 2, filaments slender, included; ovary 2 locular, ovule 1 in each locule; style long, filiform, persistent; stigma capitate; drupe firmly enclosed in the calyx tube, breaking up into two 1-seeded pyrenes.

Fls & Frts.: Major part of the year.

Notes: Native to Tropical America, fairly naturalized in Meghalaya, specially in Garo Hills.

Specimens studied: Meghalaya: Garo Hills-Tasek *B. Neogi* 3569; *K. Haridasan* 4110, Darugiri 4125 (*NEHU).

We are thankful to the Director, Royal Botanic Garden, Kew for determining our specimens.

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* The abbreviation 'NEHU' is yet to find a place in 'Index Herbarium'.

36. NOTES ON THREE RARE AND INTERESTING ORCHIDS COLLECTED FROM TRIVANDRUM DISTRICT, KERALA

The systematic and intensive exploration of the botany of Trivandrum Dt., Kerala have so far resulted in the rediscovery of a number of rare and little known plants. Notes on three rare terrestrial orchids namely *Aphyllorchis montana* (Thw.) Reichb. f., *Eulophia cellenii* (Wight) Blume and *Malaxis latifolia* Sm. are presented in this paper.

Aphyllorchis montana (Thw.) Reichb. f., in *Linnaea* 41: 57. 1876; Hook f. *Fl. Brit. India* 6: 116. 1890; Fischer in *Gamble, Fl. Pres. Madras* 3: 1014. 1957 (repr. ed.); King & Pantl. in *Ann. Roy. Bot. Gard. Calcutta* 8: t. 349. 1898. *Apaturia montana* Thw. *Enum.* 301. 1861.

Terrestrial, saprophytic herbs devoid of

chlorophyll, 50-60 cm high; stems sheathed. Basal sheaths 1 cm long, close; upper 1.5 cm long, 4-5 cm apart. Flowers straw-coloured in racemes upto 20 cm long; bracts up to 1 cm long, lanceolate. Sepals up to 1 cm long, ovate, obtuse. Petals up to 1 cm long with a prominent mid rib; lip 1 x 0.5 cm, 3-lobed, broader than the sepals, clawed, mid lobe tapering towards the apex into an obtuse tip, side lobes rounded; column 9 mm long; stigma short, ovate; anthers 2-celled; pollinia 2, each 2-lobed.

Hooker (l. c.) recorded this species from "Khasia Mts., and Sikkim Himalaya (Griffith) and Ambagamowa Dt. in Ceylon (Thwaites)". Although Gamble (l.c.) stated that this plant occur in "Mysore at Cadamany (Barber) Anamalai Hills; Karianshola in dense evergreen forests at 2500 ft. (Fischer)", no representative collection of this species is available in MH and no collection from South India is available in CAL. The present collection from Boneccord in Trivandrum Dt. is its first report from Kerala.

Aphyllorchis montana (Thw.) Reichb. f. is closely allied to *A. prainii* Hook. f., and both of them are often treated as conspecific. Seidenfaden writes (on the Herbarium Sheet No. 171 of *A. prainii* Hook. f. collected by G. Craib and deposited at CAL): "I believe *A. prainii* to be conspecific with *A. montana*". *A. montana* is, however, distinct from *A. prainii* by the absence of the ovate, acute wing like auricles at the claw of the lip.

This plant is very rarely found in the shady undergrowth of the dense evergreen forest in moist humus enriched soil.

Specimens examined: ASSAM. Dasrung: Jaintia Hills, June 1899, *Dr. Prain* 304 (CAL). SIKKIM HIMALAYA. Suru Bathan, August 1894, *R. Pantling* 344 (CAL). KERALA. Trivandrum Dt.: Boneccord, 26-5-1979, *M. Mohanan* 63292 (MH).

Eulophia cullenii (Wight) Blume, Orch. Archip. Ind. 182. 1858, in Obs.; Radhakrishnan in Bull. bot. Surv. India 13: 3. 1971. *Cyrtopera cullenii* Wight, Icon. t. 1754. 1851. *Eulophia flava* (Lindl.) Hook. f. Fl. Brit. India 6: 7. 1890. *p. p. E. cullenii* (Wight) Fischer in Gamble Fl. Pres. Madras 1435. 1928.

Terrestrial herbs, up to 0.5 high; rhizome tuberous. Leaves up to 27 x 6 cm, oblong-lanceolate, acute appearing with the inflorescence. Flowers 5.5 cm long, bright yellow, in racemes up to 0.4 m long; bracts 1.5 x 0.3 — 0.5 cm, ovate-lanceolate, acuminate, yellow; pedicels 2.5 cm long. Dorsal sepals 3 cm long, narrowly lanceolate, acute; laterals up to 3.5 cm long, falcate, oblanceolate. Petals 2.5 x 1.5 cm, broadly ovate, clavate. Lip 3-lobed; lateral lobes up to 2 cm long, obtuse, falcate; midlobes 1 cm long tongue-shaped with 3 crests. Mentum conical; column 1.5 cm long, flat; stigma conical, oblique; pollinia two, jointed with a strap, granular.

This species is closely allied to *E. flava* (Lindl.) Hook. f. but differs by the mature leaves being larger in size and the absence of pyriform basal calli at the disc. Distinguishing the two species, Robert Wight *l.c.* writes, "I am indebted to General Cullen, Resident of Travancore, for my specimens of this gorgeous plant. It is nearly allied to *C. flava*, with which I at first confounded it. Like it the flowers are yellow and scape appears before the leaves, but the appearance of the plant so far as I can learn from the comparison with *Dr. Royles* figure is altogether different. On these grounds I have dedicated it to the discoverer, a zealous investigator of the plants of that tract of country but more especially of the economical application of the useful ones. This plant seems to be a large one some of the leaves being nearly 2 ft. in length."

This species is not so far represented in MH. The present collection is made during March from Pattampara, on the way to Agastyarkudam where a small population of it was seen in flower in the rocky regions of the grassy slopes. It was introduced in the experimental garden at Coimbatore but it failed to flower so far.

The valid publication of *E. cullenii* dates from Blume (1858) and the combination made afresh by Fischer (1928) is superfluous.

Specimens examined: KERALA. Trivandrum Dt.: Pattampara, 17.3.1978, *M. Mohanan* 54686 (MH).

Malaxis latifolia Sm. Rees. Cycl. 22: no. 3. 1819; Holtum in Revis. Fl. Malaya 1: 195. 1972 (repr. ed.); Seidenfaden & Smitinand in Orch. Thailand 2(1): 146. 1959. *Microstylis latifolia* J. J. Sm. Fl. Buit. 6: 248, f. 185. 1905. *M. congesta* Reichb. f. Walp. Ann. 6: 206. 1861; Hooker in Fl. Brit. India 5: 680. 1890; King & Pantl. in Ann. Roy. Bot. Gard. Calcutta 8: Pl. 23. 1898.

Terrestrial herbs; stems stout, 4-5 leaved. Leaves 14-27 x 7-8 cm, ovate-elliptic; petioles broad with a sheath of 3-4 cm long. Scape with raceme 20-25 cm long, stout. Flowers yellowish green, closely arranged; bracts up to 5 mm long; pedicels 3 mm long. Sepals curved inwards; dorsal 3-4 x 1 mm; laterals 3-4 x 1.5 mm, 3-nerved. Petals 4 x 0.5 mm; lip 2 x 2 mm, 3-lobed, side lobes broad and

blunt. Column 0.9 mm long; anthers on the back of the column, pollinia 4.

Although Hooker recorded this plant from Deccan Peninsula no earlier collections from South India and elsewhere is represented in MH so far. The species was found rare in the undergrowth of dense evergreen forests of Boneccord.

This species is an addition to the Gamble's Fl. Pres. Madras and can be distinguished from the other South Indian species as follows:

1. Lip with auricles.....*M. acuminata*
1. Lip without auricles:
 2. Lip distinctly 3-lobed; lobes entire at apex*M. latifolia*
 2. Lip without distinct lobes, apex lacinate:
 3. Plants with pseudobulbs; leaves sessile. *M. densiflora*
 3. Plants without pseudobulbs; leaves petioled:
 4. Flowers less than 5 mm long; lip retuse in outline.....*M. versicolor*
 4. Flowers 7-10 mm long; lip semi-orbicular in outline.....*M. stocksii*

Specimens examined: ASSAM. N. Cachar Hills, 28.8.1908, *William G. Craib* 514 (CAL); Mizo hills, *R. M. Datta* 33268 (CAL); Ienkeri, July, 1859, *s.l.* 652 (CAL). BIHAR. Paraniatte, *s.l.* Acc. No. 449378 (CAL). KERALA. Trivandrum Dt.: Boneccord, 22-5-1979, *M. Mohanan* 63216 (MH). SIKKIM. Tropical valleys, July, 1892, *R. Pantling* 89 (CAL); "Namaga Ind."; Oct. 1886, *Dr. King's Collector* Acc. No. 449369 (CAL).

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